

CLAIMS

1. (Currently Amended) A display device comprising a power supply unit for supplying power, a display unit for displaying an image, a data input circuit for inputting display data corresponding to an image to be displayed on the display unit and a control circuit, wherein:

said power supply unit includes a power supply which varies a power supply ability with time, switches a plurality of different power supply abilities or has average produced power lower than average power required to rewrite one screen, a power storage unit which has a capacity of stored electric power for holding power higher than the average power required to rewrite one screen and a stored power detecting circuit which detects an amount of electric power stored in said power storage unit;

said power supply is connected to said display unit via said power storage unit;

said display unit includes a matrix display area, in which a large number of pixels ~~having an optical modulating function capable of changing brightness, a reflectance, a transmittance and colors by a voltage or a current~~ are arranged in a matrix, and a driving circuit including a sequence circuit for driving the matrix display area;

an input of said data input circuit is connected to a data input terminal, and an output is connected to said driving circuit of the display unit;

said pixels have a pixel memory for holding display data and are driven according to a pixel rewrite period for rewriting a display content of said display unit and a pixel holding period for holding the display content; and

said control circuit controls said driving circuit to rewrite said display content of said display unit in response to output of a stored power detection signal indicative of a detected amount of stored electric power not less than the average power required for at least rewriting of an image screen from said stored power detecting circuit to rewrite the screen of said display unit.

2. (Cancelled).

3. (Cancelled).

4. (Currently Amended) A display device comprising a power supply unit for supplying power, a display unit for displaying an image, a data input circuit for inputting display data corresponding to an image to be displayed on the display unit, a data buffer for storing the input display data, rewrite input means for requesting a change in the display content of the display unit and a control circuit, wherein:

said power supply unit includes a power supply which changes a power supply ability with time, switches a plurality of different power supplying abilities or has average produced power lower than average power required to rewrite one screen, a power storage unit which has a capacity of stored electric power for holding power higher than the average power required to rewrite one image screen and a stored power detecting circuit which detects an amount of electric power stored in the power storage unit;

said power supply is connected to the display unit via the power storage unit;

said display unit includes a matrix display area in which a large number of pixels ~~having an optical modulating function capable of changing brightness, a reflectance, a transmittance and colors by a voltage or a current~~ are arranged in a matrix, and a driving circuit including a sequence circuit for driving the matrix display area;

said pixels have a pixel memory for holding display data and are driven according to a pixel rewrite period for rewriting the display content of the display unit and a pixel holding period for holding the display content; and

said control circuit controls the driving circuit so as to rewrite a still screen by rewriting a pixel display content when said stored power detecting circuit outputs a stored power detection signal indicative of a detected amount of stored electric power not less than the average power required for at least rewriting of an image screen, and controls the driving circuit to rewrite the screen continuously in response to output of a stored power detection signal indicative of a detected amount of stored electric power not less than the average power required to rewrite the

screen continuously by said stored power detecting circuit so as to repeatedly rewrite the display content of the display unit to display a moving picture on said display unit.

5. (Currently Amended) A display device comprising a power supply unit for supplying power, a display unit for displaying an image, rewrite input means for requesting a change in the display content of the display unit, a data input circuit for inputting display data corresponding to an image to be displayed on the display unit, a data buffer for storing the input display data and a control circuit, wherein:

said power supply unit includes a power supply which changes a power supply ability with time, switches a plurality of different power supplying abilities or has average produced power lower than average power required to rewrite one screen, a power storage unit which has a capacity of stored electric power for holding power higher than the average power required to rewrite one screen and a stored power detecting circuit which detects an amount of electric power stored in the power storage unit;

said power supply is connected to the display unit via the power storage unit;

said display unit includes a matrix display area in which a large number of pixels ~~having an optical modulating function capable of changing brightness, a reflectance, a transmittance and colors by a voltage or a current~~ are arranged in a matrix, and a driving circuit including a sequence circuit for driving the matrix display area;

said driving circuit is stopped in operation to stop rewriting the display content of the screen of the display unit when a stored power detection signal having detected an amount of stored electric power not more than the average power required for at least rewriting of a screen of the display unit is output from the stored power detecting circuit;

said driving circuit is controlled to rewrite a still screen so to rewrite the screen by rewriting a pixel display content when a stored power detection signal indicative of a detected amount of stored electric power not less than the average power required for at least rewriting of a screen of the display unit is output from the stored power detecting circuit; and

said control circuit controls the driving circuit to rewrite a screen of the display unit so as to display a moving picture by rewriting the pixel display content continuously when the stored power detecting circuit detects a stored power detection signal indicative of a detected amount of stored electric power not less than the average power required to rewrite the screen continuously.

Claims 6-8. (Cancelled).

9. (Original) The display device according to Claim 1, wherein said power supply is a solar cell.

10. (Original) The display device according to Claim 9, wherein said solar cell is a thin-film solar cell formed on the same substrate as the display unit is formed.

11. (Original) The display device according to Claim 9, wherein the solar cell is an organic thin-film solar cell formed on the same substrate as the display unit is formed.

12. (Original) The display device according to Claim 11, wherein said pixel circuit built in the pixels of said display unit and said driving circuit for driving the display unit are thin-film transistors.